

REMARKS

The Examiner has rejected all of the claims, namely 1-28, under 35 U.S.C. §103(a) as obvious in light of Hase et al. (US Patent No. 5,099,134) in view of Tang (US Patent No. 5,949,850) and Nishiki (US Patent No. 4,725,734). Applicant respectfully traverses this new ground of rejection and asks the Examiner to reconsider the rejection in view of the below remarks.

As previously explained, Hase fails to disclose the placement of any pixilated scintillators in the holes 15 formed by the partition plates 1 and 2. To the contrary, Hase discloses a fan-beam focusing collimator which functions to focus radiation in a converging manner onto a scintillation crystal (note fan-beam focusing slits 3, Fig. 1). That Hase does not place any pixilated scintillators into the collimation holes is made further apparent to those skilled in the art by the disclosure of radiation transparent collimation frame bottom element 12 (Fig. 4; col. 4, lines 29-30). Manifestly, the only reason for making the bottom frame 12 radiation transparent is to allow radiation to pass through and out of the collimator frame to a scintillator positioned adjacent to the collimator.

While Hase does state at col. 4, ll. 64-68 that the same principles disclosed for the fan beam collimator can be used for a parallel beam collimator, it remains the case that Hase does not suggest placement of individual crystals between the septa of the disclosed collimator, as required by independent claims 1, 10, 19, and 28. As

previously explained, Hase teaches the requirement of a box frame 13 as shown in Fig. 5, with walls 9 and transparent bottom frame element 12, as a necessary structural requirement of the disclosed collimator. Therefore, the collimator of Hase is intended to be used, and in fact must be used, with a scintillation crystal slab. There simply is no suggestion or teaching in Hase of any other use of the disclosed collimator.

It is axiomatic that a prior art reference must be considered as a whole for what it discloses to those skilled in the art, and thus it is improper to take individual statements out of the context of the prior art reference as a whole. Hase considered as a whole teaches away from placement of individual crystals between septa in requiring the box frame 13 and transparent bottom element 12.

Tang discloses a focused anti-scatter grid for x-ray applications. As is known, an x-ray source has a cone-beam shape as shown in Tang Fig. 1. Tang teaches the stacking of multiple grid layers as shown in Figs. 11-12 to provide a focusing grid. Tang states that the holes in the bottom layer can be filled with an x-ray scintillator or phosphor material 33 so that the device performs the function of anti-scatter x-ray and x-ray scintillator. However, Hase specifically teaches away from such insertion, as described above. Further, Hase relates to collimators for radioisotope scintigrams (*i.e.*, nuclear medicine images), not x-ray transmission imaging. Thus, the Tang disclosure is non-analogous to the Hase device. Still further, Hase discloses only a single "layer" grid; thus Tang teaches away from filling the holes of Hase's single layer grid with phosphor as such would defeat Tang's purpose of providing an x-ray anti-scatter

device. See col. 11, lines 24-25. Still further yet, there would be no reason or purpose to fill the holes of the Hase collimator with x-ray phosphor material as proposed in the Office action as Hase does not relate to x-ray imaging and Tang identifies no problem with the operation of a collimator such as disclosed by Hase that would be solved by filling holes with an x-ray phosphor.

Additionally, since Hase requires the scintillation slab to be positioned below the collimator, there is no need to use reflectors to maximize the output intensity of each scintillation crystal. The combination Hase and Nishiki thus would be a non-useful endeavor that would drive up production costs without adding any benefits. The mere fact that these references can be combined does not render the resultant combination obvious because there is no suggestion of the desirability to combine the references.

*See, e.g.* MPEP 2143.01.

### **Conclusion**

For the foregoing reasons claims 1-28 should be patentable over Hase in view of Tang and Nishiki because there is no desirability to combine the references. Therefore, Applicant respectfully submits that such a combination is not suggested, is taught away from, and would be improper.

In view of the foregoing remarks, Applicant submits that all of the claims are in proper format, are patentably distinct from the references of record and are in condition for allowance.

Serial No. 10/627,844  
May 29, 2007  
(Tuesday After Holiday)  
Page 5

Favorable reconsideration of this application and the issuance of a Notice of Allowance are earnestly solicited.

Please charge any fee or credit any overpayment pursuant to 37 CFR 1.16 or 1.17 to Novak Druce Deposit Account No. 14-1437.

| RESPECTFULLY SUBMITTED, |   |           |              |          |              |
|-------------------------|---|-----------|--------------|----------|--------------|
| NAME AND<br>REG. NUMBER | Vincent M. DeLuca<br>Attorney for Applicants<br>Registration No. 32,408           |           |              |          |              |
| SIGNATURE               |  |           |              | DATE     | 29 May 2007  |
| Address                 | Novak, Druce, DeLuca + Quigg LLP<br>1300 I Street, N.W., Suite 1000 West Tower    |           |              |          |              |
| City                    | Washington  | State     | D.C.         | Zip Code | 20005        |
| Country                 | U.S.A.  | Telephone | 202-659-0100 | Fax      | 202-659-0105 |